



UNITED STATES PATENT AND TRADEMARK OFFICE

len
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/795,850	03/08/2004	Tomohiro Oshiyama	KOT-0091	1242
23413 7590 01/28/2008 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103			EXAMINER THOMPSON, CAMIE S	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 01/28/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/795,850	Applicant(s) OSHIYAMA ET AL.	
	Examiner Camie S. Thompson	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 11/12/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 12, 2007 has been entered.
2. Applicant's amendment and accompanying remarks filed October 15, 2007 and November 12, 2007 are acknowledged.
3. Applicant's declaration submitted is acknowledged.

Claim Rejections - 35 USC § 103

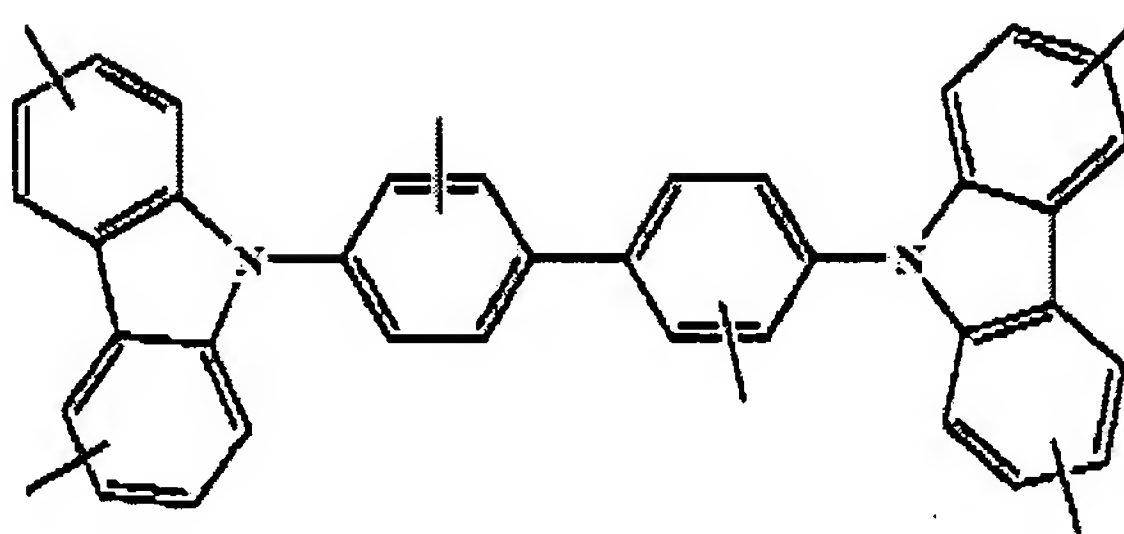
1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al., U.S. Patent Number 6,902,830.

Thompson discloses organic light emitting devices wherein the emissive layer comprises a host material and an emissive molecule (see abstract and column 6, lines 30-68). Additionally, the reference discloses that the emissive molecule can be selected from the group of phosphorescent organometallic complexes such as fac tris(2-phenylpyridine) iridium. Column 32, lines 42-68 of

the reference disclose molecules that fall within the scope of the host material. The reference discloses molecules such as



wherein a line segment denotes possible substitution at any available carbon atom or atoms of the indicated ring by alkyl or aryl groups (see column 32, line 40-column 33, line 33). The Thompson reference reads on the present claims when R_1 and R_2 are alkyl or aryl; n_a and n_b are both 1 and Ar_1 represents a phenylene group substituted with an alkyl or aryl group. Thompson does not specifically disclose that the substituent on the phenylene group is substituted at the ortho-position to the chemical bond. Thompson does disclose possible substitution at any available carbon atom by alkyl or aryl groups. Substitution position on the compound affects HOMO and LUMO energies. Therefore, it would have been obvious to one of ordinary skill in the art to have the substituent present at the ortho-position in order to control current-voltage characteristics and the lifetime of the device.

Response to Arguments

3. Applicant's arguments filed October 15, 2007 and November 12, 2007 have been fully considered but they are not persuasive. Applicant argues that the Thompson reference does not disclose the preferred host material as recited by amended claim 1. Thompson does disclose possible substitution at any available carbon atom by alkyl or aryl groups. Molecules having the substituent on the phenylene group at the ortho-position are encompassed in the scope of the Thompson reference, which encompasses the host material of the present claims. Also, applicant argues that the Thompson reference has CBP as the preferred host material. The claims of the Thompson reference recite a possible substitution that is the same host material as presented by the present claims. Applicant has presented a declaration comparing the CBP compound of the Thompson reference and the carbazole compound with the ortho substitution of the present claims. Although the Thompson reference discloses CBP as the preferred host, the reference does not exclude the possible substitution of the alkyl or aryl groups at the ortho position, as required by the present claims. Therefore, it would be expected that the reorganization energies of the host material in the Thompson reference would be the same as the reorganization energies of the host material in the present claims. The rejection is maintained.

4. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period


Application/Control Number:
10/795,850
Art Unit: 1794

Page 5

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached at (571) 272-1478. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


/Arti Singh/
Primary Patent Examiner 1794
1/20/2008